

A

REQUEST FOR FILING A CONTINUATION OR DIVISION OF AN INTERNATIONAL APPLICATION

DOCKET NUMBER	ANTICIPATED CLASSIFICATION OF THIS APPLICATION		PRIOR APPLICATION EXAMINER	ART UNIT
34291/GM/1p	CLASS	SUBCLASS		

Address to:
 Assistant Commissioner for Patents
 Washington, D.C. 20231

This is a request for filing a ☒ continuation ☐ divisional application under 37 CFR 1.53(b), of pending prior international application Number PCT /EP99/04222 filed June 17, 1999
 entitled : "MULTIFUNCTIONAL ELECTRONIC PALMTOP COMPUTER"

which designated the United States.

Note: 37 CFR 1.53(c) or (d) cannot be used to file a continuation or divisional application of an international application which has not entered the national stage.

CLAIMS	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
TOTAL CLAIMS (37 CFR 1.16(c))	27	- 20 =	7	x \$ 18. =	\$ 126. =
INDEPENDENT CLAIMS (37 CFR 1.16(b))	1	- 3 =		x \$ 80. =	
MULTIPLE DEPENDENT CLAIMS (if applicable) (37 CFR 1.16(d))				+ \$ 260. =	
				BASIC FEE (37 CFR 1.16(a))	+ 710. =
				Total of above Calculations =	836. =
				Reduction by 50% for filing by small entity (Note 37 CFR 1.9, 1.27, 1.28).	418. =
				TOTAL =	418. =

- Enclosed are the specification, claims and drawing(s).
- ☒ A statement to establish small entity status under 37 CFR 1.9 and 1.27 is enclosed.
- ☒ The Commissioner is hereby authorized to charge any fees which may be required under 37 CFR 1.16 and 1.17, or credit any overpayment to Deposit Account No. 13-3860. A duplicate copy of this sheet is enclosed.
- ☐ A check in the amount of \$ _____ is enclosed.
- ☐ Amend the specification by inserting before the first line the sentence: "This application is a ☐ continuation ☐ division of international application number PCT / _____ filed _____
 (status : abandoned, pending, etc.) _____ "

(REQUEST FOR FILING A CONTINUATION OR DIVISION OF AN INTERNATIONAL APPLICATION, PAGE 2)

6. ☒ A declaration under 37 CFR 1.63 is enclosed.

7. ☒ Priority of foreign application number PD98U000067 filed on June 19, 1998
in ITALY is claimed under 35 U.S.C. 119(a)-(d).

☐ The certified copy ~~is enclosed.~~ will follow

8. ☒ A preliminary amendment is enclosed. (redrafted claims 28 to 54 and new abstract of the disclosure)

9. ☒ Also enclosed:

IDS + Search Report + Cited References

Address all future correspondence to: (May only be completed by applicant, or attorney or agent of record.)

MODIANO & ASSOCIATI

Via Meravigli, 16
20123 MILANO
I T A L Y

Phone IT+02+869 2442

Fax IT+02+863 860

December 14, 2000

Date



Signature

Guido MODIANO (Reg. No. 19,928)

Typed or printed name

- ☐ Inventor(s)
☐ Assignee of complete interest. Certification under 37 CFR 3.73(b) is enclosed.
☒ Attorney or agent of record
☐ Filed under 37 CFR 1.34(a)

Registration number if acting under 37 CFR 1.34(a) _____



MODIANO, JOSIF, PISANTY & STAUB

EUROPEAN PATENT ATTORNEYS** U.S. PATENT AGENTS*

Via Meravigli, 16 - I-20123 MILANO - ITALY

Phone IT+02+869 2442

Fax IT+02+863860

DR. ING. G. MODIANO* ** (Reg. No. 19,928)

DR. ING. A. JOSIF* ** (Reg. No. 22,917)

DR. ING. M. PISANTY*

DR. ING. G. STAUB*

Daniel J. O'BYRNE** (Reg. No. 36,625)

DR. ING. N. ZANOTTI*

DIPL. ING. C. S. RENIERO*

S. L. A. MODIANO*

Milan, Italy - December 14, 2000



RE: New U.S. Patent Application in the name of Silvano MANSUTTI et al to be filed as continuation of application No. PCT/EP99/04222 of June 17, 1999

Agent's docket: 34291/GM/lp

Hon.

COMMISSIONER OF PATENTS AND TRADEMARKS

WASHINGTON 20231 D.C. - U.S.A.

Sir,

Applicant desires processing of the above Continuation Application based on International Application No. PCT/EP99/04222 of June 17, 1999.

This is to enclose:

- 1) Transmittal letter in duplicate; Authorization to collect US \$ 418.;
- 2) Assignment of the Invention to: 4P S.r.l.;
Deposit account order for the assignment fee in the amount of US\$ 40.;
- 3) Small Entity verified Statement;
- 4) Specification and claims with combined declaration and power of attorney duly signed on December 12, 2000 and attached thereto for the above Patent Application;
- 5) Six formal drawings accompanying the specification;
- 6) Preliminary Amendment with new claims 28 to 54 and new abstract of the disclosure;

We further enclose the following documents:

- 7) Notification of the International Application Number and of the International Filing Date;
+ Copy of the Request;
- 8) Notification concerning submission or transmittal of Priority Document;
- 9) Notification of transmittal of the International Search Report or the Declaration;

- + International Search Report and cited references;
 - + Information Disclosure Statement under 37 CFR 1.97(b);
- 10) Copy of publication of International Application published under P.C.T.;
 - 11) Notice informing the Applicant of the communication of the International Application to the designated offices;
 - 12) Demand;
 - 13) Notification of receipt of Demand by competent International preliminary Examining Authority;
 - 14) Information concerning elected offices notified of their election;
 - 15) Notification of transmittal of the International Preliminary Examination Report + International Preliminary Examination Report;

The priority date of the Italian Patent Application N. PD98U000067 of June 19, 1998 is respectfully claimed. A Certified Copy thereof will follow.

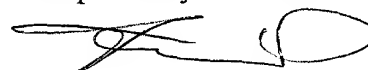
Please place of record in the file the enclosed papers and kindly acknowledge receipt thereof.

Will you please collect immediately the credit specified in the deposit account order, so as to allow the Application to receive an earliest filing date, however within:

DECEMBER 19, 2000.

Thanking you in advance,

Respectfully submitted



Guido MODIANO
(Reg. No. 19,928)

Docket No. 34291/GM/lp

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assignors : Silvano MANSUTTI et al
Assignee : 4P S.r.l.
Ser. No. : still unknown
Filed : still unknown
For : "MULTIFUNCTIONAL ELECTRONIC PALMTOP
COMPUTER"
A.U. : still unknown
Examiner : still unknown

Hon.

The Commissioner of Patents and Trademarks

Washington D.C. 20231 - U.S.A.

PRELIMINARY AMENDMENT

Sir,

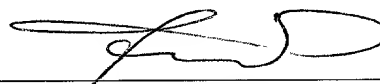
please enter the following preliminary amendment in the above-identified
Application:

substitute the original claims 1 to 27 with the enclosed redrafted
claims 28 to 54;

substitute the original abstract with the enclosed redrafted abstract of
the disclosure where merely the numeral references have been deleted.

It is to be noted that the newly submitted claims 28 to 54 and the new abstract of the disclosure do not comprise any new matter and are merely aimed at meeting U.S. filing requirements.

Respectfully submitted



Guido MODIANO
(Reg. No. 19,928)
Agent for the Applicants
Via Meravigli, 16
20123 MILANO – ITALY
Tel.: +39-02-869 2442

Milan, Italy – December 14, 2000

Encls.: a.a.

WHAT IS CLAIMED IS:

28. A multifunctional electronic palmtop computer of the type which comprises, in a single box-like body, a keyboard, a display, a CPU, working storage and mass storage, a printer and a PCMCIA card interface, further
 5 comprising a protective cover for said interface which is provided with locking means adapted to prevent direct accessibility to said interface, said cover requiring the intervention of a tool to release said means so as to allow access to said interface.

29. The computer according to claim 28, wherein said locking means are
 10 actuated, on mutually opposite sides, by buttons, each button comprising a first component and a second component which are operatively coupled and are respectively arranged externally and internally with respect to a wall of said cover, said second component having a hook which abuts elastically
 15 against a retainer which protrudes rigidly from said body, said hook being disengageable from said retainer in contrast with an elastic means by virtue of a pressure applied by a user on said first component and transmitted to said second component.

30. The computer according to claim 29, wherein once one of the sides of said cover is rested against an edge of its seat, said cover can slide until it
 20 couples by snap action to the portion of the profile of said seat that constitutes said retainer and lies below it.

31. The computer according to claim 30, wherein a grub is inserted in said first component, on the outward-looking face; a seat for a pin is formed diametrically in said grub and an opening is formed in said wall of said
 25 cover which is interposed between said first and second components of the button, said opening forming cutouts for at least partially accommodating the ends of said pin, said pin being adapted to rotate rigidly with said grub in order to reach a specific position in which, by at least partially inserting its ends in said cutouts by virtue of a pressure applied to said first component,
 30 said pressure can be transmitted to said second component in contrast with

said elastic means so as to disengage said hook from said retainer.

32. The computer according to claim 31, wherein said grub has, on the face that remains on the outside, a slot in which it is possible to insert the point of said tool so as to turn it in order to orientate said pin.

5 33. The computer according to the claim 32, wherein said elastic means is a fork-shaped flat spring which is interposed between a partition that lies inside said cover and said second component.

34. The computer according to claim 33, wherein a longitudinal hollow is formed in said second component on the side directed toward said internal
10 partition, said hollow partially accommodating said flat spring.

35. The computer according to claim 34, wherein a tab protrudes from the inward face of said first component and is adapted to be inserted in a complementarily shaped seat formed in said second component on the opposite side with respect to said longitudinal hollow, said opening formed
15 in the wall of the cover that is interposed between said first component and said second component being provided with said cutouts for the ends of said pin and being crossed by said tab.

36. The computer according to claim 35, wherein a cantilevered tooth protrudes from one end of said first component and has two parallel
20 protrusions which constitute retention elements which can be inserted in a complementarily shaped seat formed in a corresponding end of said second component.

37. The computer according to claim 28, wherein said cover comprises means for preventing said PCMCIA cards from accidentally sliding out of
25 the interface.

38. The computer according to claim 37, wherein said means for preventing accidental sliding comprise at least one raised portion which protrudes inside said cover and is adapted to ensure mechanical abutment against said PCMCIA cards.

30 39. The computer according to claim 28, wherein an opening is formed in

said cover and a connector for connection to said PCMCIA card interface can be inserted through it.

40. The computer according to claim 39, wherein said opening is protected by a rubber plug.

5 41. The computer according to claim 40, wherein said plug is provided with a protrusion which is rigidly fixed to said cover.

42. The computer according to claim 41, wherein said plug is externally provided with a raised grip portion.

43. The computer according to claim 28, comprising a read/write device
10 for microchip cards, which is arranged on the lower face of the body and can be accessed through a slot which has a flexible flap which can be folded only during the insertion of one of said microchip cards.

44. The computer according to claim 43, comprising a further read/write
15 device for microchip cards of the type known as SIM format, said device being arranged in the part below the power supply battery pack, being protected by a cover and having a connector which is shaped complementarily for the insertion of said SIM-format card.

45. The computer according to claim 28, comprising a seat which is
20 adapted to contain a stylus to be used for said display, said seat being formed in the cover of said printer.

46. The computer according to claim 28, comprising a paper containment compartment and a printer, said compartment alternatively containing a roll of paper supported by a roll holder or a pack of continuous paper.

47. The computer according to claim 46, comprising said roll holder has a
25 U-shaped structure which comprises a pivot provided, at its ends, with a fixed arm and with an arm which can fold by means of a film hinge.

48. The computer according to claim 47, wherein said arms of the roll holder are flat.

49. The computer according to claim 28, comprising a cellular telephone.

30 50. The computer according to claim 49, wherein said cellular telephone

is of the type known as GSM and comprises an electronic board which is arranged laterally to said paper containment compartment at the lower part of said body, said board being arranged vertically.

51. The computer according to claim 50, wherein said cellular telephone
5 comprises an antenna which is connected to said electronic board and is arranged laterally with respect to said paper containment compartment, in a forward position with respect to said board.

52. The computer according to claim 28, comprising a satellite positioning system.

10 53. The computer according to claim 52, wherein said satellite positioning system comprises an electronic board which is arranged laterally with respect to said paper containment compartment at the lower part of said body, said board being arranged vertically.

54. The computer according to claim 53, wherein said satellite
15 positioning system comprises a receiving antenna which is connected to said electronic board and is arranged in the front part of said body below said paper containment compartment.

ABSTRACT OF THE DISCLOSURE

A multifunctional electronic palmtop computer comprising, in a single box-like body, a keyboard, a display, a CPU, working storage and mass
5 storage, a printer and a PCMCIA card interface, further comprising a protective cover for the interface which is provided with locking means adapted to prevent direct accessibility to the interface.

APPLICATION
FOR
UNITED STATES OF AMERICA

SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

Be it known that We,

Silvano MANSUTTI
Italian citizen
of PADOVA – ITALY

and

Roberto CARDIN
Italian citizen
of PADOVA – ITALY

have invented certain improvements in

“MULTIFUNCTIONAL ELECTRONIC PALMTOP COMPUTER”

of which the following description in connection with the accompanying drawings is a specification, like reference characters on the drawings indicating like parts in the several figures.

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation of application number PCT/EP99/04222 filed on June 17, 1999.

BACKGROUND OF THE INVENTION

5 The present invention relates to a multifunctional electronic palmtop computer.

Portable electronic computers which allow the operator who uses them to perform a plurality of functions by means of a single structure whose dimensions are so small that it can be comfortably held in the palm of one
10 hand, are commercially rather widespread.

These computers, accordingly known as "palmtops", generally have a visual display, a keyboard, a CPU, working storage and mass storage and, in the more recent configurations, a printer.

Said printer, in particular, can be of the type that prints on paper rolls or
15 on continuous and/or cut paper.

The most valuable feature of this type of computer is certainly that it provides an operator with a plurality of functions by using simply a single device.

One frequent use of a computer of this type is certainly related to sales
20 from mobile points of sale, since all the data and the quantities related to the products ordered by the client can be entered directly, updating in each instance the stock of available products and allowing to issue the freight bill or invoice immediately.

Nowadays there is in fact an ever growing need to integrate these
25 computers as fully as possible, providing them with the highest possible number of functions so as to be able to work by using a single device which is in any case complete with all the tools.

SUMMARY OF THE INVENTION

The aim of the present invention is to provide an electronic palmtop
30 computer which provides and integrates in a single body a plurality of

functions which currently require the use of a variety of mutually distinct and separate devices.

Within the scope of this aim, an important object of the present invention is to provide an electronic palmtop computer which, in terms of size, has an
5 extremely compact structure so as to be practical in use.

A further important object of the present invention is to provide an electronic computer which though integrating a plurality of different functions in a single structure ensures a simple operation which requires no particular expertise.

10 A further important object of the present invention is to provide an electronic palmtop computer which can be produced in practice with equipment and facilities which are conventional in this sector.

A further object of the present invention is to provide an electronic palmtop computer which offers the user greater practicality in use by
15 integrating in a single device a plurality of different functions which currently usually require the use of different devices.

This aim, these objects and others which will become apparent hereinafter are achieved by a multifunctional electronic palmtop computer comprising, in a single box-like body, a keyboard, a display, a CPU,
20 working storage and mass storage, a printer and a PCMCIA card interface, characterized in that it further comprises a protective cover for said interface which is provided with locking means adapted to prevent direct accessibility to said interface, said cover requiring the intervention of a tool to release said means so as to allow access to said interface.

25 BRIEF DESCRIPTION OF THE DRAWINGS

Further characteristics and advantages of the present invention will become apparent from the following detailed description of an embodiment thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

30 Figure 1 is a perspective view of a multifunctional electronic palmtop

computer according to the present invention;

Figure 2 is a front view of the lower part of the computer of Figure 1;

Figure 3 is an exploded view of a detail of the computer of Figure 1;

Figure 4 is a sectional view, taken along a longitudinal plane, of a detail
5 of the computer of Figure 1 in a first operating configuration;

Figure 5 is a sectional view, taken along a longitudinal plane, of the
detail of Figure 4 in a second operating configuration;

Figure 6 is a schematic side view of the computer of Figure 1;

Figures 7, 8 and 9 are respective sectional views, taken along the
10 longitudinal plane VII-VII, of the detail of Figure 6 in various operating
steps;

Figure 10 is a front view of the detail of Figures 7, 8 and 9;

Figure 11 is a perspective view of the rear part of the computer of Figure
1;

Figure 12 is a perspective view of the computer of Figure 1 with the
15 printer cover open in a first printing configuration;

Figure 13 is a perspective view of a detail of the computer of Figure 12;

Figure 14 is an exploded view of the detail of Figure 13;

Figure 15 is a perspective view of the computer of Figure 1 with the
20 printer cover open in a second operating configuration.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the above figures, an electronic palmtop computer
according to the invention is generally designated by the reference numeral
10 and comprises a substantially flat and elongated box-like body
25 constituted by the mating of an upper half-shell 12 with a lower half-shell
13.

An electronic board, not shown for the sake of simplicity in the above
cited figures, is arranged inside the body 10 and is connected to a keyboard
14 and to a display 15.

30 In this constructive embodiment, the display 15 is of the type commonly

known as "touch-screen", since it is possible to interact with the electronic board simply by touching the surface of the screen with a finger or with a stylus.

For this purpose, the display 15 is covered by an appropriately provided pressure-sensitive film which is not shown for the sake of simplicity.

Computer 10 is provided with adapted software capable of interpreting and recognizing handwriting, corresponding for example to a signature, produced with a slight pressure on the display 15.

The software converts the graphic signs traced by an operator on the display 15 into encoded characters which can be interpreted by any computer program.

Computer 10 has, in this case, a laser scanner 16 of a per se known type, which is arranged in the front part of the body of the computer 10 at the lower half-shell 13 and is adapted for example to read bar codes.

The laser scanner 16 can be operated by a user by means of one of the two buttons 17 arranged on either side of the flat body or by means of the keyboard 14 or, in other cases, by means of a slight pressure on the touch-screen display 15.

Computer 10 has, in the front part of the upper half-shell 12, a paper compartment cover 18 which covers a compartment 19 for containing paper and a printer 20 which is partially visible in Figure 10.

A slit 21 is formed in said paper compartment cover 18 and the paper can exit through said slit after printing.

In particular, said paper containment compartment 19 is preset, in this case, to contain paper both as continuous forms and as rolls, as described in greater detail hereinafter.

Computer 10 is also provided with a magnetic badge reader 22 of a per se known type which is conveniently located in the front part of the upper half-shell 12.

The printer 20 of the computer can be of the impact or thermal type.

Computer 10 further comprises an interface 23 for PCMCIA cards 24 which is located in the lower part of the upper half-shell 12.

Computer 10 has, in particular, a cover 25 for protecting the interface 23 which has a contoured structure and is adapted to couple, by snap action, to
5 a portion of the profile of the lower half-shell 13.

The cover 25 has a protective wall 27 which is interposed between two parallel fixing shoulders 26 and is meant to be placed in front of said interface 23 in order to prevent direct access thereto.

A seat 28a for a first component 29a of a button 29 is provided on each
10 shoulder 26.

A first opening 28b and a second opening 28c are formed on the face of the seat 28a on which the first component 29a of the button 29 rests; the first and second openings are provided respectively in the upper and central part and are conveniently shaped as described in greater detail hereinafter.

15 The first component 29a is engaged in the seat 28a and, in combination with a second component 30, constitutes the button 29 for actuating locking means, designated simply by the reference numeral 31 hereinafter, for said cover 25.

The first component 29a is constituted by a substantially flat body which
20 is shaped complementarily to the seat 28a and in which there is a through hole 32; the first component has, at its upper end, a cantilevered tooth 33 with two parallel protrusions 34.

The protrusions are retention elements which are shaped so that they are inserted and glued in a complementarily shaped first seat 35 formed at the
25 upper end of said second component 30, which is conveniently wedge-shaped.

A grub 36 is inserted in the through hole 32 of the first component 29a and has a slot 37 on the face that remains towards the outside and a seat 38 for a pin 39 on the other face.

30 In this case, the slot 37 and the seat 38 for the pin 39 are parallel and are

both diametrical with respect to the grub 36.

The second component 30 is adapted to be placed in the internal part of the cover 25 between the shoulder 26 and a parallel partition 40 which protrudes monolithically from the cover 25.

5 In particular, the second component 30 is monolithically associated with the first component 29a by means of insertion and gluing of the tooth 33 and of the protrusions 34 in the first seat 35 of the upper end after they have passed through the first opening 28b, which is shaped complementarily thereto.

10 A cantilevered hook 41 protrudes at the lower end of the second component 30.

A longitudinal hollow 42 is also formed in the second component 30 at the part that is directed toward the internal partition 40; the hollow partially accommodates a fork-shaped flat spring 43.

15 In particular, the flat spring 43 has a first end 43a which rests against the internal partition 40 and a second end 43b which abuts against the hook-shaped lower end 41 of the second component 30.

A second seat 44a is also formed in the central part of the second component and is adapted to mate with a complementarily shaped tab 44b
20 which protrudes from the inward-looking face of the first component 29a of the button 29 after it has passed through the second opening 28c.

If the pin 39 is arranged horizontally, as shown in Figures 7 and 8, by applying to the first component 29a a pressure adapted to push it toward the inside of the cover 25 the pin 39 can be inserted with its ends in
25 complementarily shaped cutouts, designated by the reference numeral 39a, provided on the second opening 28c.

In this manner, the pressure applied to the first component 29a is transmitted to the second component 30 which is monolithically coupled thereto and which, in contrast with the action of the flat spring 43, releases
30 its hook 41 from the retainer 45 constituted by a portion of the upper edge

of the lower half-shell 13, thus allowing to open the cover 25.

When the pin 39 is turned through an angle of 90° , so as to arrange it vertically as shown in Figure 9, it is not possible to insert the ends of the pin in the cutouts 29a of the second opening 28c, so that though applying a pressure to said first component 29a said first component is unable to transmit the pressure to the second component 30 of the button 29 in order to overcome the elastic resistance of the flat spring 43.

In this way, therefore, the hook 41 cannot be disengaged from the retainer 45 and accordingly the cover 25 remains locked so as to close access to the interface 23.

The pin 39 is turned by turning a screwdriver or an equivalent tool with the tip inserted in the slot 37 of the grub 36.

An opening 46 is formed in this case in the wall 27 for protecting the cover 25, and a connector, shown schematically and designated by the reference numeral 47, can be inserted through said opening without having to disengage the cover 25 from the computer 10.

The opening 46 is normally protected by a rubber plug 48 which is joined by means of a protrusion 50 provided with a larger end 49 which engages a cavity formed in the cover 25 so as to be nondetachably coupled to the cover 25.

The plug 48 is externally provided with a raised grip portion 51 which facilitates grip and allows access to only one of the PCMCIA cards 24, as shown in Figures 4 and 5.

The presence of the cover 25 prevents direct access to the PCMCIA interface 23; in particular, when the cover is locked it prevents the removal of the PCMCIA cards 24 by unauthorized personnel, despite allowing all the data transfer operations that can be performed by means of the direct connection of said connector 47 to said interface 23.

Two raised portions, not shown for the sake of simplicity, can further be provided inside the cover 25, protecting the PCMCIA cards against sliding

out accidentally by virtue of a simple mechanical abutment.

The configuration of the cover 25 is such as to protect the inside more than satisfactorily, since it is substantially waterproof in the presence of water sprays.

5 It is particularly important to note that the cover 25 prevents access to the interface 23, which in this case is in the lower part of the computer 10, coupling thereto in a very practical manner.

Very simply, once the cover 25 has been rested against the end edge 25a of its seat, formed in the upper half-shell 12, said cover can slide until it
10 couples with a snap action to the portion of the profile of the lower half-shell 13 that lies below it.

In this constructive configuration, the computer 10 has, in the lower half-shell 13, an elastic strap 52 for gripping it having a first fixed end 53 and a second end 54 provided with a disengageable hook.

15 Computer 10 is also provided with a first read/write device, schematically designated by the reference numeral 55, for microchip cards 56; said device is located at one side in the front region of said lower half-shell 13.

A second read/write device 57 for microchip cards 56 is arranged on the
20 lower face of the body 10, in the region directly below the first end 53 of the strap 52.

In order to insert a microchip card 56 in the second read/write device 57 it is necessary to disengage the second end 54 of the strap 52 and raise it adequately until access to the insertion region is achieved.

25 Each one of the first and second read/write devices 55 and 57 is adapted for reading and writing microchip cards 56 (commonly termed "smart cards") and is provided with a flexible flap 58 which closes the slot for inserting the microchip cards 56 and is folded only during the insertion of the cards.

30 A nonlimitative example of the microchip cards 56 is given by cards of

the CP8 or ISO 7816 standard types.

The flap 58 acts as a brush for cleaning the microchip card 56 that is inserted, in order to prevent dirt from entering the read/write device and dirtying it or damaging it.

5 A third read/write device 59 for SIM-type cards, designated by the reference numeral 60, is arranged in the lower half-shell 13 in the part located below the power supply battery pack, which is not shown in Figure 9 for the sake of simplicity.

10 The third read/write device 59 is provided with a connector 61 which can be accessed when the SIM-type card 60 is inserted after lifting a cover 62.

The computer 10 is also provided with a stylus 63 to be used for the touch-screen display 15; the stylus is adapted to be inserted in a complementarily shaped seat 64 formed in the paper compartment cover 18.

15 The stylus 63 has a portion with protrusions 65, so that once it is inserted in the seat 64 it is retained therein by friction.

In particular, the stylus 63 can be inserted in the seat 64 from the left or from the right, so as to allow comfortable and practical use to a left-handed user as well.

20 The paper containment compartment 19, in this case, can alternatively accommodate a roll 66 and a pack 67 of continuous paper 67, as shown in Figures 12, 13, 14 and 15.

25 It is in fact possible to remove the pack 67 from the compartment 19 in which it had been inserted earlier for printing on continuous paper, as shown in Figure 15, and to arrange in the part left empty a roll holder 68 which supports a roll 66 (whose maximum outside diameter is 28 mm).

The roll holder 68 is constituted by a pivot 69 which is provided, at one end, with a first fixed flat arm 70 which protrudes at right angles thereto; the holder further has, at its other end, a second flat arm 71 which can be folded by a film hinge 71a.

30 Each one of the first and second arms 70 and 71 is externally provided

with a raised portion 72.

In the operating configuration, the first and second arms 70 and 71 are mutually parallel and cause the roll holder 68 to be U-shaped.

In order to insert the roll 66 in the compartment 19, as shown in Figure 5 12, it is necessary to lower the second arm 71 of the roll holder 68 and engage the roll 66 in the pivot 69.

After this has been done, the second arm 71 is returned to the operating configuration and then the roll holder 68, which now supports the roll 66, is inserted in a complementarily shaped seat which is formed in the paper 10 containment compartment 19 in the region in front of the printer 20.

In this way, the user can choose to print on the roll 66 or, as an alternative, on the continuous paper 76, having both already available and without having to perform any intervention.

The U-shaped configuration of the roll holder 68 and therefore the 15 presence of the first and second arms 70 and 71 facilitates the insertion and extraction of the roll 66 and at the same time keeps it locked in position when the paper compartment cover 18 is closed.

In this particular constructive configuration, a cellular telephone is integrated in the computer 10 and in this case is of the type commonly 20 known as GSM.

The telephone comprises an electronic board 73 which is arranged, with particular reference to the arrangement of the computer 10 shown in Figure 6, with a vertical orientation laterally to the paper containment compartment 19 at the lower half-shell 13.

25 The electronic board 73 is connected to an antenna 74 which is also arranged laterally to said paper containment compartment 19 in a forward position with respect to the board 73.

The telephone allows a user to immediately transmit, for example, the data related to the delivery of goods at the recipient customer's premises 30 without having to use any other device.

The computer 10 is further completed by integrating therein, in this case, a satellite positioning system, known more commonly as GPS (Global Positioning System), which also comprises an electronic board 73a which is connected to a receiving antenna 75.

5 In this case, the electronic board 73a for the satellite positioning system is also arranged vertically and laterally to the paper containment compartment 19 on the opposite side with respect to the position of the electronic board 73 of said GSM cellular telephone.

10 The receiving antenna 75 is instead located in the front part of the body 11 below said paper containment compartment 19, so that when a user needs to use it he/she can receive the signals of the satellite network dedicated to the GPS service.

The present invention is susceptible of numerous modifications and variations, all of which are within the scope of the same inventive concept.

15 In practice it has been observed that the present invention fully achieves the intended aim and all the intended objects.

First of all, it is important to note that the present invention provides an electronic palmtop computer which is capable of providing and integrating in a single body a plurality of functions for which it is currently necessary to resort to the use of a variety of mutually separate devices.

It is also important to note that the above-described computer has a very compact structure, so as to be extremely practical to use.

25 A particular advantage is certainly due to the fact that said computer ensures simple operation and that though integrating a plurality of separate functions in a single body it requires no particular technical expertise.

Another advantage is that the above-described computer can be produced in practice with equipment and facilities which are conventional in the field.

The materials employed, so long as they are compatible with the contingent use, may be any according to requirements.

30 All the details may furthermore be replaced with other technically

equivalent elements.

The disclosures in Italian Utility Model Application No. PD98U000067 from which this application claims priority are incorporated herein by reference.

CLAIMS

1. A multifunctional electronic palmtop computer of the type which comprises, in a single box-like body, a keyboard, a display, a CPU, working
5 storage and mass storage, a printer and a PCMCIA card interface, characterized in that it further comprises a protective cover for said interface which is provided with locking means adapted to prevent direct accessibility to said interface, said cover requiring the intervention of a tool to release said means so as to allow access to said interface.

10 2. The computer according to claim 1, characterized in that said locking means are actuated, on mutually opposite sides, by buttons, each button comprising a first component and a second component which are operatively coupled and are respectively arranged externally and internally with respect to a wall of said cover, said second component having a hook
15 which abuts elastically against a retainer which protrudes rigidly from said body, said hook being disengageable from said retainer in contrast with an elastic means by virtue of a pressure applied by a user on said first component and transmitted to said second component.

3. The computer according to claim 2, characterized in that once one of
20 the sides of said cover is rested against an edge of its seat, said cover can slide until it couples by snap action to the portion of the profile of said seat that constitutes said retainer and lies below it.

4. The computer according to claim 3, characterized in that a grub is inserted in said first component, on the outward-looking face; a seat for a
25 pin is formed diametrically in said grub and an opening is formed in said wall of said cover which is interposed between said first and second components of the button, said opening forming cutouts for at least partially accommodating the ends of said pin, said pin being adapted to rotate rigidly with said grub in order to reach a specific position in which, by at least
30 partially inserting its ends in said cutouts by virtue of a pressure applied to

said first component, said pressure can be transmitted to said second component in contrast with said elastic means so as to disengage said hook from said retainer.

5 5. The computer according to claim 4, characterized in that said grub has, on the face that remains on the outside, a slot in which it is possible to insert the point of said tool so as to turn it in order to orientate said pin.

6. The computer according to the claim 5, characterized in that said elastic means is a fork-shaped flat spring which is interposed between a partition that lies inside said cover and said second component.

10 7. The computer according to claim 6, characterized in that a longitudinal hollow is formed in said second component on the side directed toward said internal partition, said hollow partially accommodating said flat spring.

8. The computer according to claim 7, characterized in that a tab protrudes from the inward face of said first component and is adapted to be
15 inserted in a complementarily shaped seat formed in said second component on the opposite side with respect to said longitudinal hollow, said opening formed in the wall of the cover that is interposed between said first component and said second component being provided with said cutouts for the ends of said pin and being crossed by said tab.

20 9. The computer according to claim 8, characterized in that a cantilevered tooth protrudes from one end of said first component and has two parallel protrusions which constitute retention elements which can be inserted in a complementarily shaped seat formed in a corresponding end of said second component.

25 10. The computer according to claim 1, characterized in that said cover comprises means for preventing said PCMCIA cards from accidentally sliding out of the interface.

11. The computer according to claim 10, characterized in that said means for preventing accidental sliding comprise at least one raised portion which
30 protrudes inside said cover and is adapted to ensure mechanical abutment

against said PCMCIA cards.

12. The computer according to claim 1, characterized in that an opening is formed in said cover and a connector for connection to said PCMCIA card interface can be inserted through it.

5 13. The computer according to claim 12, characterized in that said opening is protected by a rubber plug.

14. The computer according to claim 13, characterized in that said plug is provided with a protrusion which is rigidly fixed to said cover.

10 15. The computer according to claim 14, characterized in that said plug is externally provided with a raised grip portion.

16. The computer according to claim 1, comprising a read/write device for microchip cards, which is arranged on the lower face of the body and can be accessed through a slot which has a flexible flap which can be folded only during the insertion of one of said microchip cards.

15 17. The computer according to claim 16, characterized in that it comprises a further read/write device for microchip cards of the type known as SIM format, said device being arranged in the part below the power supply battery pack, being protected by a cover and having a connector which is shaped complementarily for the insertion of said SIM-format card.

20 18. The computer according to claim 1, characterized in that it comprises a seat which is adapted to contain a stylus to be used for said display, said seat being formed in the cover of said printer.

19. The computer according to claim 1, characterized in that it comprises a paper containment compartment and a printer, said compartment
25 alternatively containing a roll of paper supported by a roll holder or a pack of continuous paper.

20. The computer according to claim 19, characterized in that said roll holder has a U-shaped structure which comprises a pivot provided, at its ends, with a fixed arm and with an arm which can fold by means of a film
30 hinge.

21. The computer according to claim 20, characterized in that said arms of the roll holder are flat.

22. The computer according to claim 1, characterized in that it comprises a cellular telephone.

5 23. The computer according to claim 22, characterized in that said cellular telephone is of the type known as GSM and comprises an electronic board which is arranged laterally to said paper containment compartment at the lower part of said body, said board being arranged vertically.

10 24. The computer according to claim 23, characterized in that said cellular telephone comprises an antenna which is connected to said electronic board and is arranged laterally with respect to said paper containment compartment, in a forward position with respect to said board.

25. The computer according to claim 1, characterized in that it comprises a satellite positioning system.

15 26. The computer according to claim 25, characterized in that said satellite positioning system comprises an electronic board which is arranged laterally with respect to said paper containment compartment at the lower part of said body, said board being arranged vertically.

20 27. The computer according to claim 26, characterized in that said satellite positioning system comprises a receiving antenna which is connected to said electronic board and is arranged in the front part of said body below said paper containment compartment.

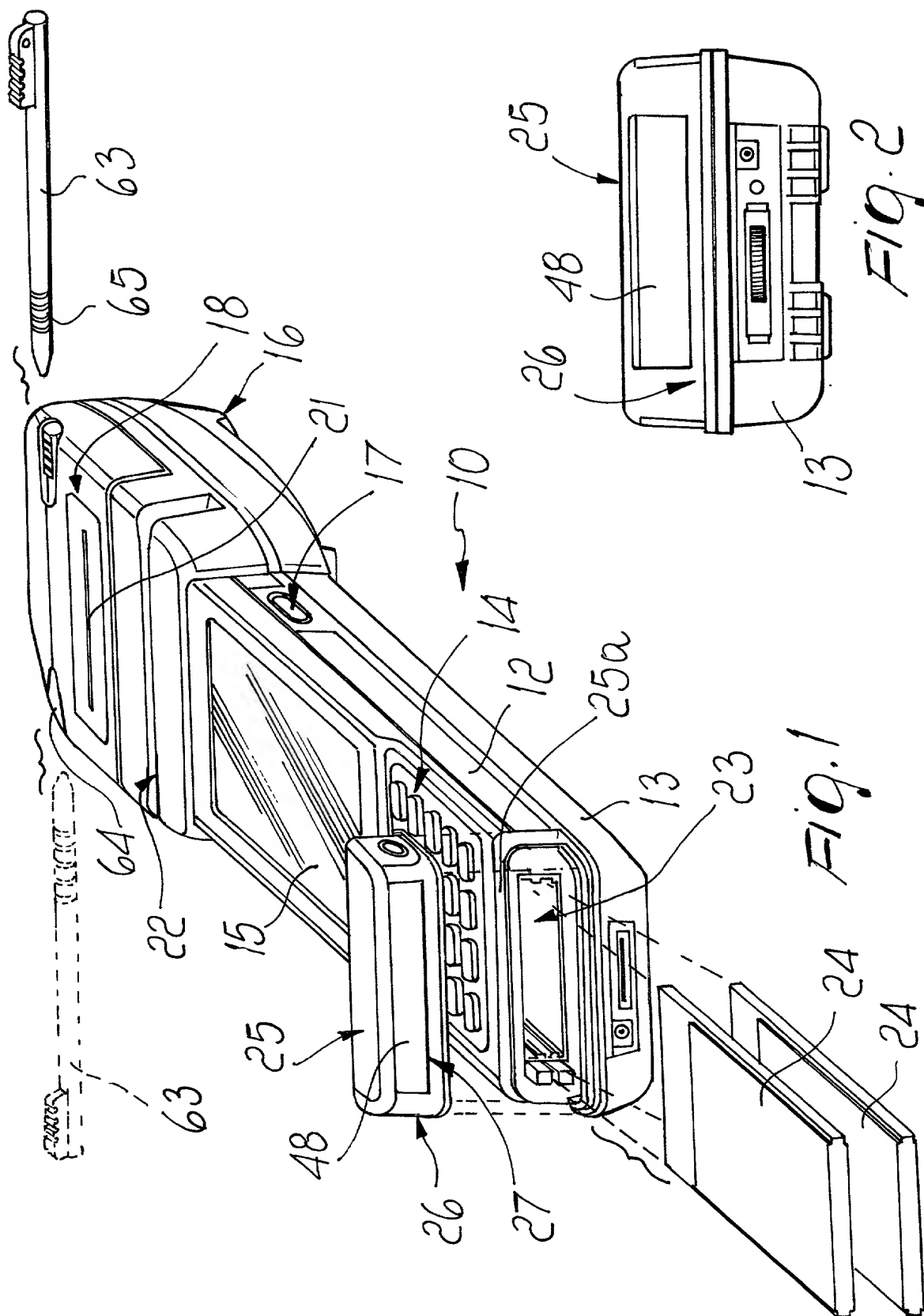
MULTIFUNCTIONAL ELECTRONIC PALMTOP COMPUTER

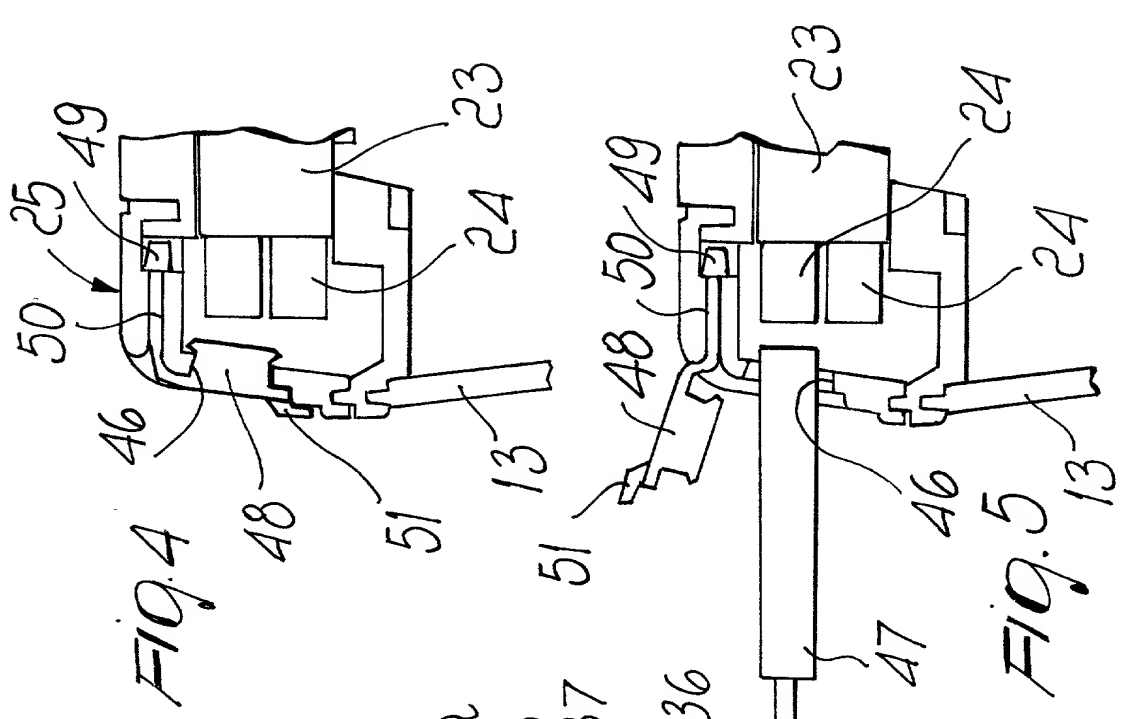
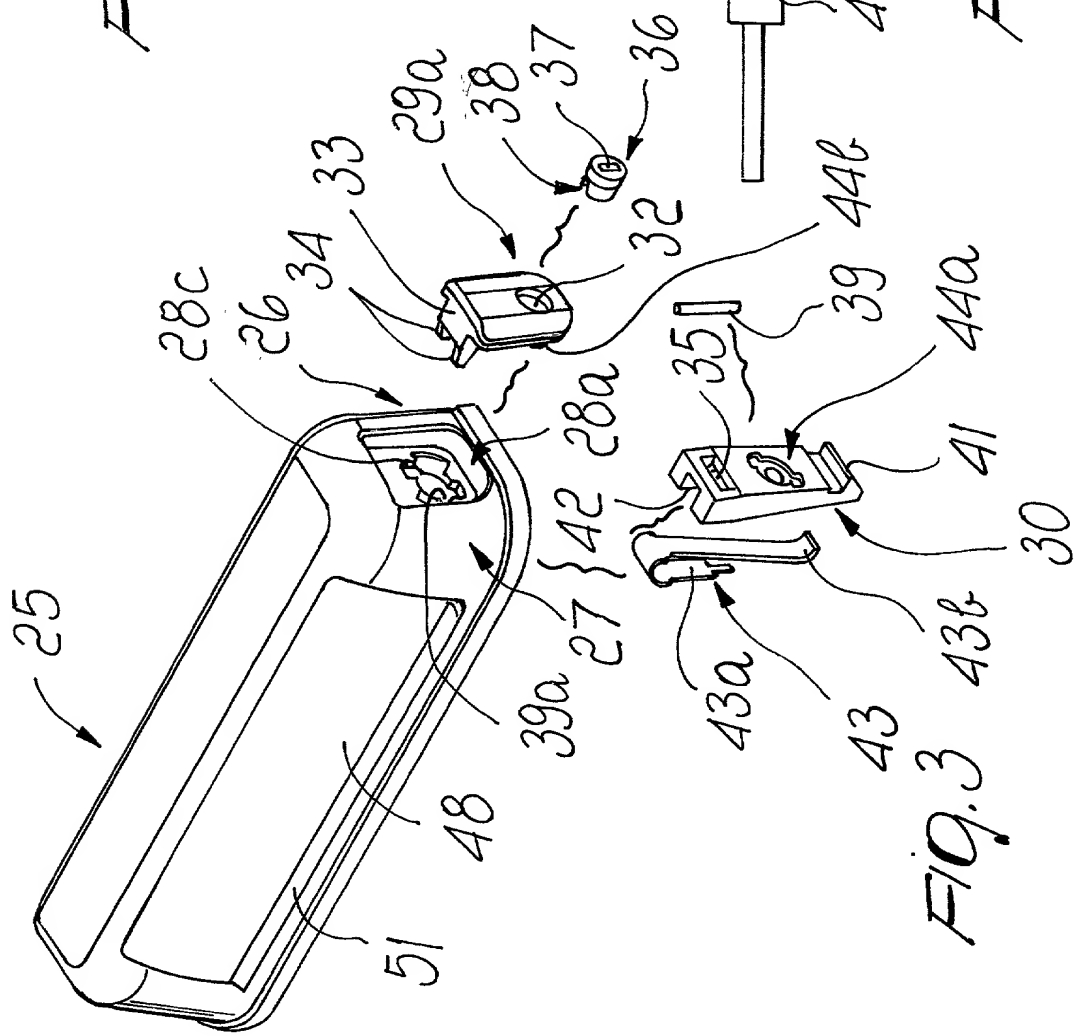
ABSTRACT OF THE DISCLOSURE

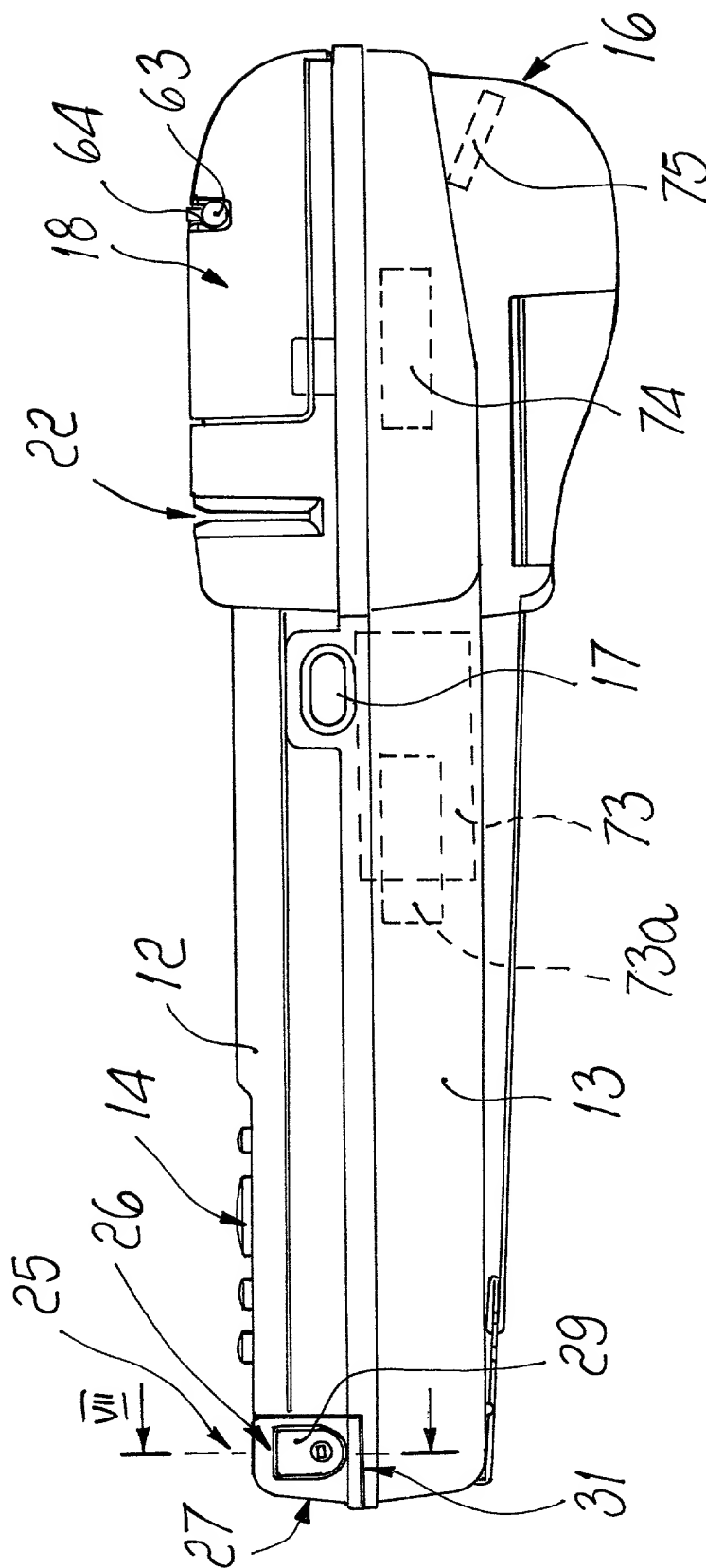
5 A multifunctional electronic palmtop computer comprising, in a single box-like body, a keyboard (14), a display (15), a CPU, working storage and mass storage, a printer and a PCMCIA card interface (23), further comprising a protective cover (25) for the interface (23) which is provided with locking means adapted to prevent direct accessibility to the interface.

10

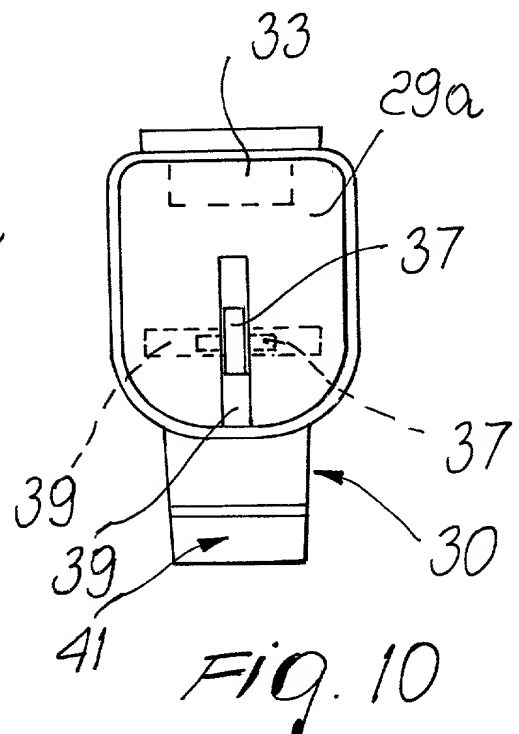
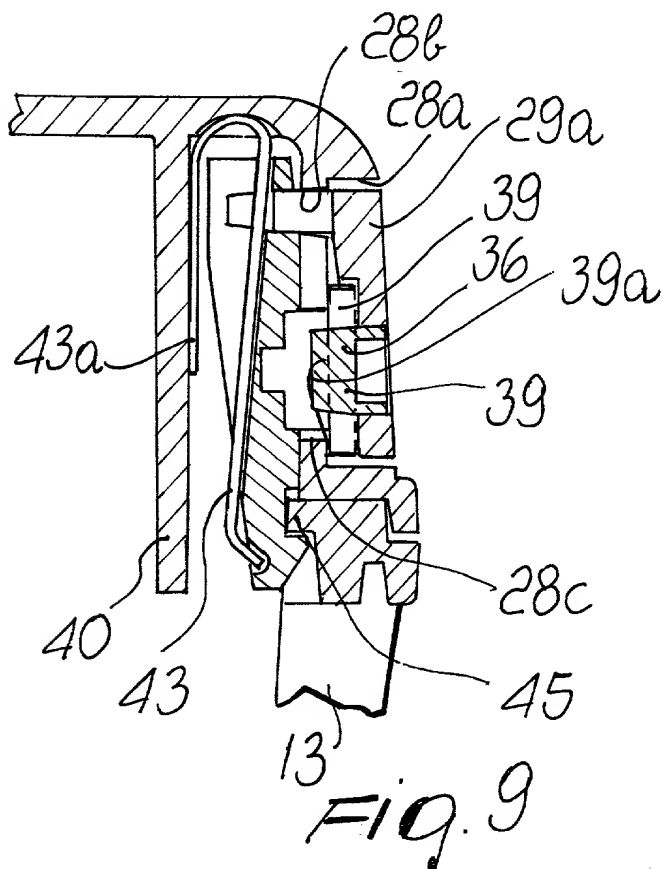
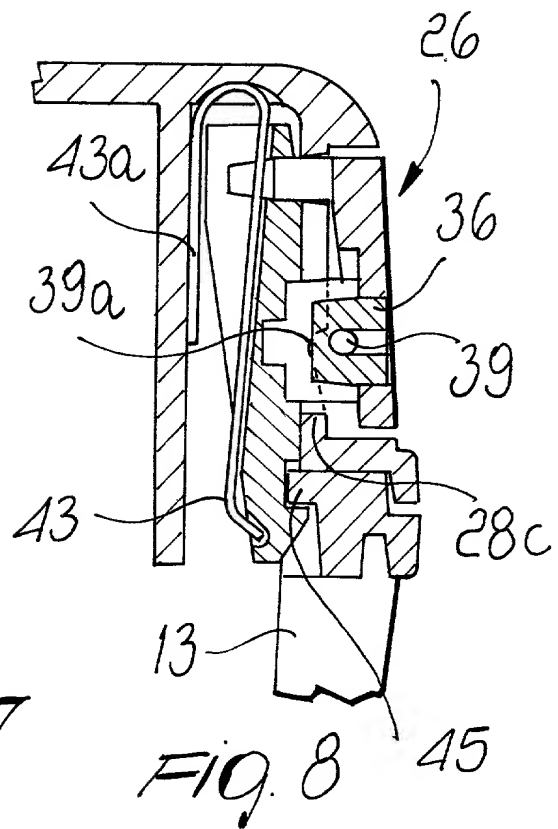
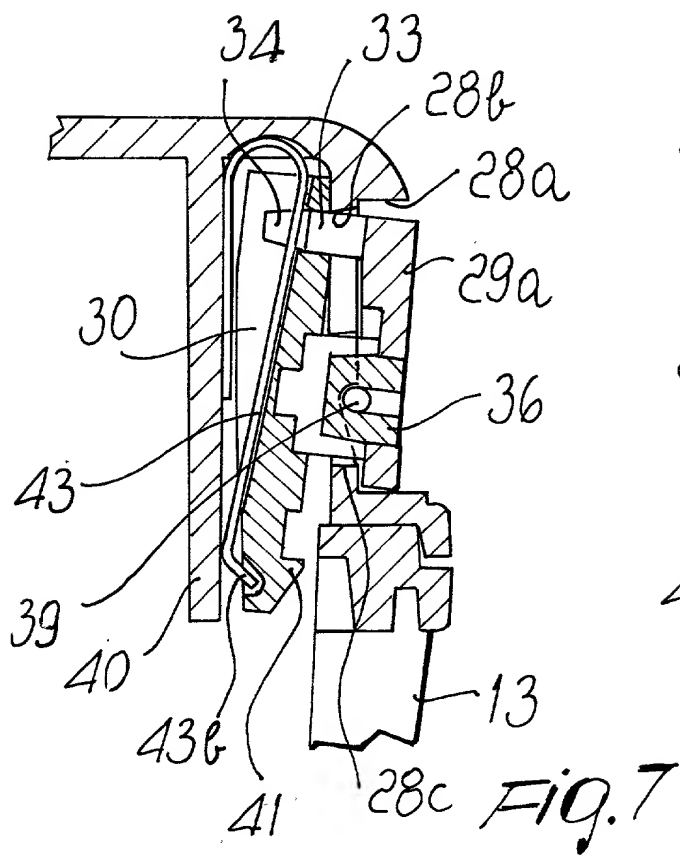
(Figure 1)







9/10



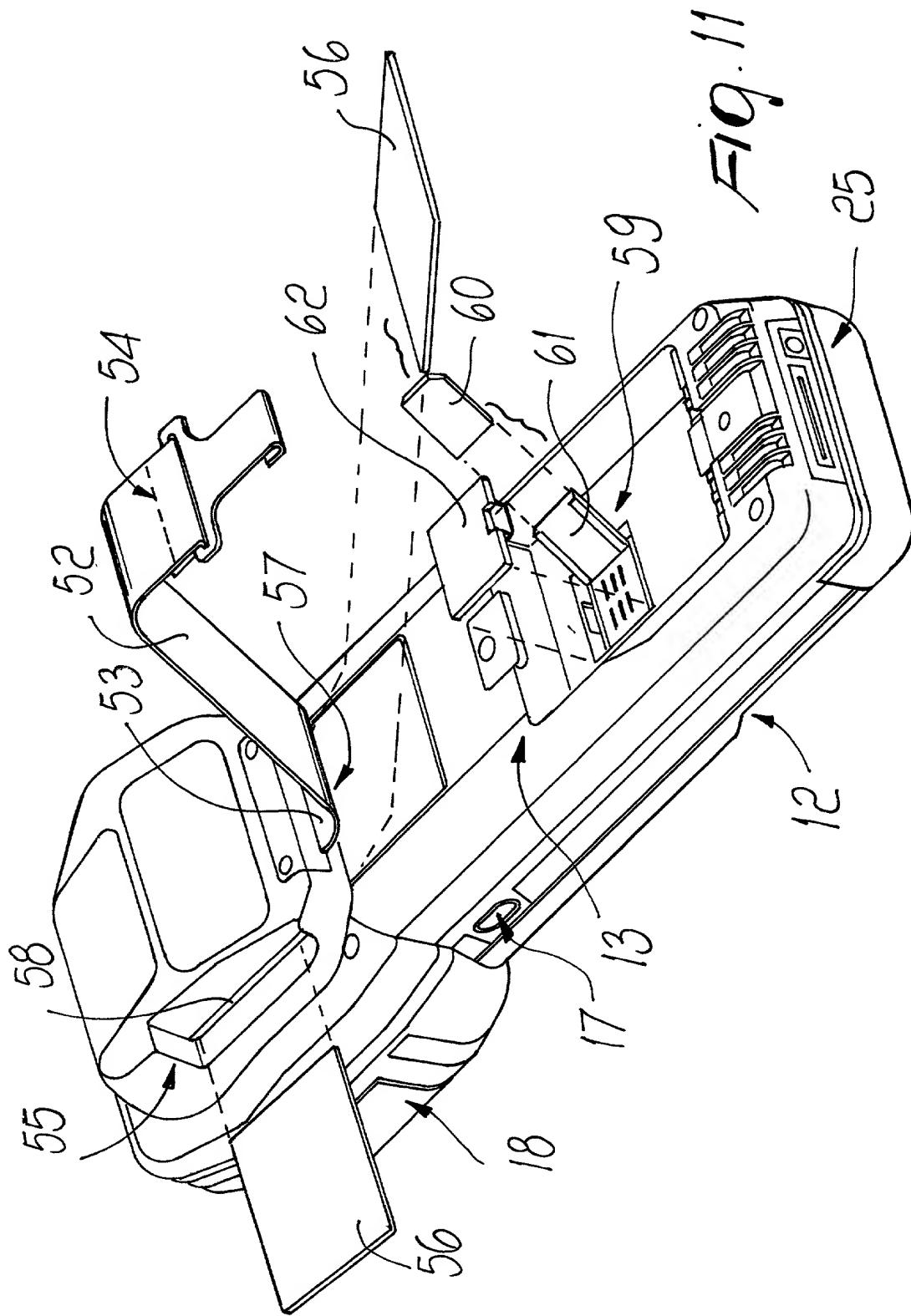
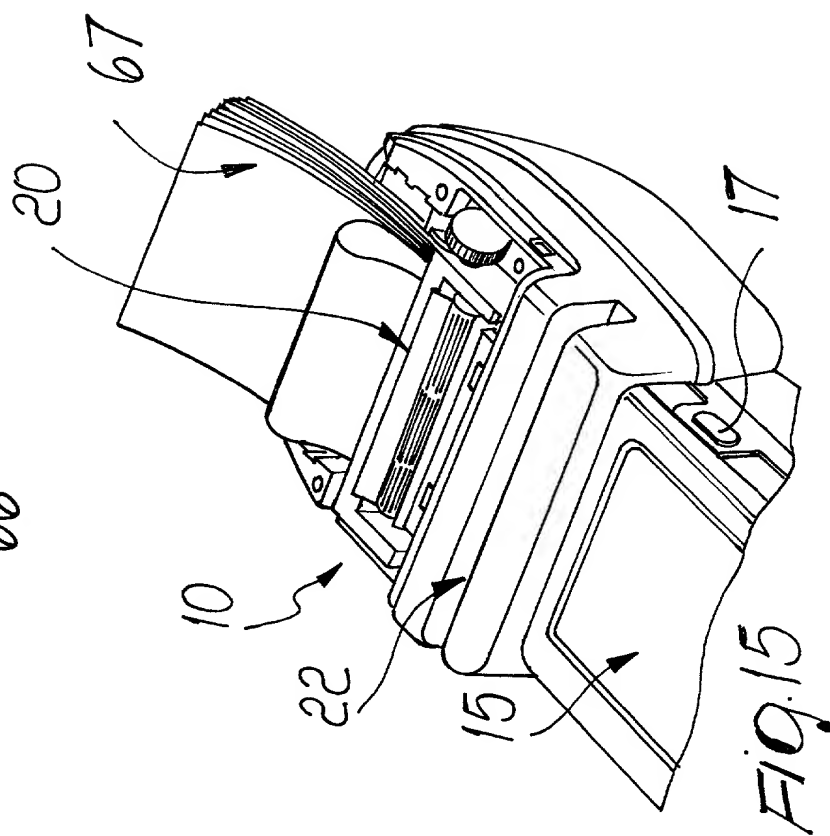
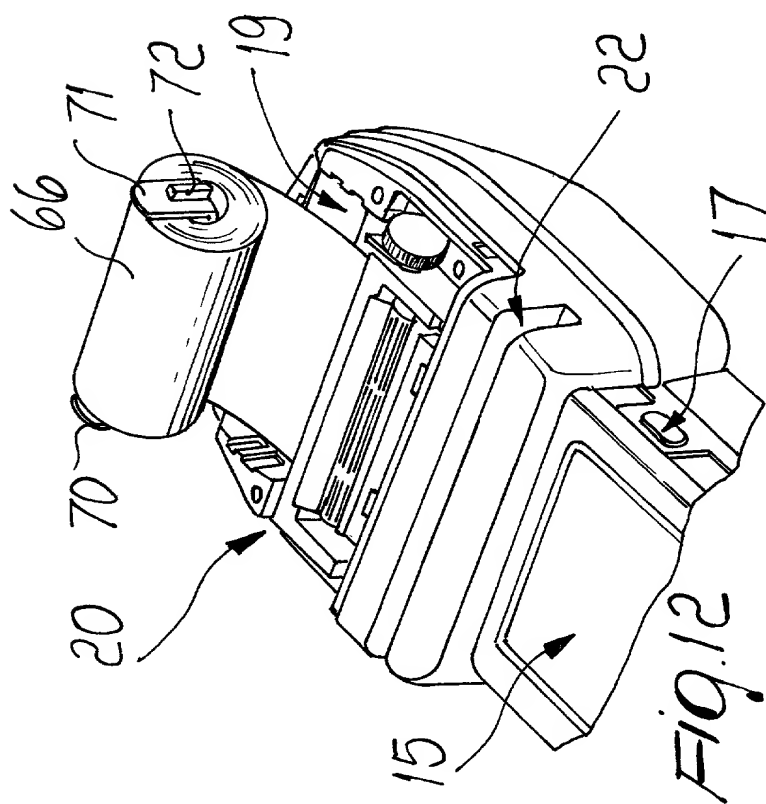
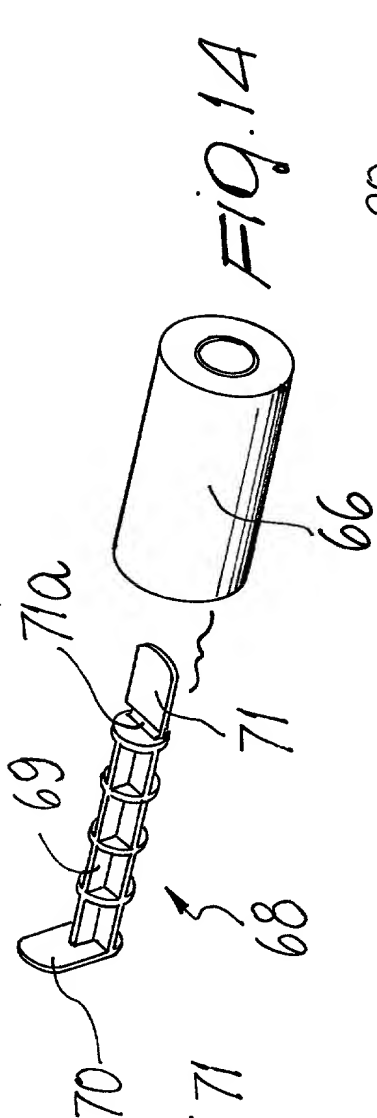
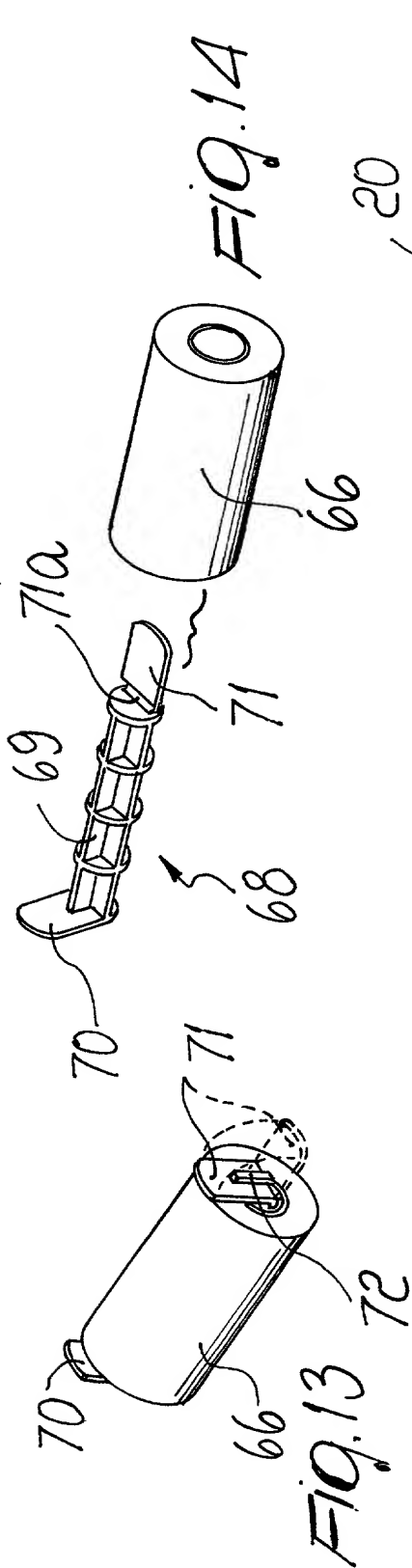


Fig. 11



PATENT

Attorney's Docket No. 34291/GM/1p

COMBINED DECLARATION AND POWER OF ATTORNEY

*(ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL, DIVISIONAL,
CONTINUATION OR CIP)*

As a below named inventor, I hereby declare that:

TYPE OF DECLARATION

This declaration is of the following type: *(check one applicable item below)*

☒ original

☐ design

NOTE: *If the declaration is for an International Application being filed as a divisional, continuation or continuation-in-part application do not check any of next two items and check appropriate one of last three items.*

☐ national stage of PCT

☐ supplemental

NOTE: *If one of the following 3 items apply then complete and also attach ADDED PAGES FOR DIVISIONAL, CONTINUATION OR CIP.*

☐ divisional

☒ continuation

☐ continuation-in-part (CIP)

INVENTORSHIP IDENTIFICATION

WARNING: *If the inventors are each not the inventors of all the claims an explanation of the facts, including the ownership of all the claims at the time the last claimed invention was made, should be submitted.*

My residence, post office address and citizenship are as stated below next to my name, I believe I am the original, first and sole inventor *(if only one name is listed below)* or an original, first and joint inventor *(if plural names are listed below)* of the subject matter which is claimed and for which a patent is sought on the invention entitled:

TITLE OF INVENTION

MULTIFUNCTIONAL ELECTRONIC PALMTOP COMPUTER

SPECIFICATION IDENTIFICATION

the specification of which: *(complete (a), (b) or (c))*

(a) ☒ is attached hereto.

(b) ☐ was filed on _____ as ☐ Serial No. _____
or ☐ Express Mail No., as Serial No. not yet known _____
and was amended on _____ *(if applicable)*.

NOTE: *Amendments filed after the original papers are deposited with the PTO which contain new matter are not accorded a filing date by being referred to in the declaration. Accordingly, the amendments involved are those filed with the application papers or, in the case of a supplemental declaration, are those amendments claiming matter not encompassed in the original statement of invention or claims. See 37 CFR 1.67.*

(Declaration and Power of Attorney [1-1]—page 1)

- (c) ☒ was described and claimed in PCT International Application No. PCT/EP99/04222 filed on June 17, 1999 and as amended under PCT Article 19 on _____ (if any).

ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

- ☒ In compliance with this duty there is attached an information disclosure statement, 37 CFR 1.97.

PRIORITY CLAIM

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.

(complete (d) or (e))

- (d) ☐ no such applications have been filed.

- (e) ☒ such applications have been filed as follows

NOTE: Where item (c) is entered above and the International Application which designated the U.S. claimed priority check item (e), enter the details below and make the priority claim.

EARLIEST FOREIGN APPLICATION(S), IF ANY FILED WITHIN 12 MONTHS (6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

COUNTRY	APPLICATION NUMBER	DATE OF FILING (month, day, year)	PRIORITY CLAIMED UNDER 37 USC 119
ITALY	PD98U000067	19 JUNE 1998 (19.6.1998)	<input checked="" type="checkbox"/> YES NO <input type="checkbox"/>
WIPO	PCT/EP99/04222	17 JUNE 1999 (17.6.1999)	<input checked="" type="checkbox"/> YES NO <input type="checkbox"/>
			<input type="checkbox"/> YES NO <input type="checkbox"/>
			<input type="checkbox"/> YES NO <input type="checkbox"/>
			<input type="checkbox"/> YES NO <input type="checkbox"/>

ALL FOREIGN APPLICATION(S), IF ANY FILED MORE THAN 12 MONTHS (6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION

POWER OF ATTORNEY

As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (List name and registration number)

Guido MODIANO (Reg. No. 19,928)

Albert JOSIF (Reg. No. 22,917)

Daniel J. O'BYRNE (Reg. No. 36,625)

SEND CORRESPONDENCE TO

MODIANO & ASSOCIATI
Via Meravigli, 16
20123 MILAN - ITALY
EUROPE

DIRECT TELEPHONE CALLS TO: (Name and telephone number)

MODIANO & ASSOCIATI
(02) 86.92.442

DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

SIGNATURE(S)

Full name of sole or first inventor Silvano MANSUTTI
Inventor's signature [Signature]
Date December 12, 2000 Country of Citizenship ITALY
Residence 35129 PADOVA - ITALY
Post Office Address Via Fornaci, 325
35129 PADOVA - ITALY

Full name of second joint inventor, if any Roberto CARDIN
Inventor's signature [Signature]
Date December 12, 2000 Country of Citizenship ITALY
Residence 35129 PADOVA - ITALY
Post Office Address Via delle Ceramiche, 88
35129 PADOVA - ITALY

Full name of third joint inventor, if any _____
Inventor's signature _____
Date _____ Country of Citizenship _____
Residence _____
Post Office Address _____

**CHECK PROPER BOX(ES) IF ANY OF THE FOLLOWING ADDED PAGE(S) FORM A
PART OF THIS DECLARATION**

- ☐ Signature for third and subsequent joint inventors. *Number of pages added* _____
- ☐ Signature by administrator(trix), executor(trix) or legal representative for deceased or incapacitated inventor. *Number of pages added* _____
- ☐ Signature for inventor who refuses to sign or cannot be reached by person authorized under 37 CFR 1.47. *Number of pages added* _____

...

- ☐ Added pages to combined declaration and power of attorney for divisional, continuation, or continuation-in-part (CIP) application.
- ☐ *Number of pages added* _____

...

If no further pages form a part of this Declaration then end this Declaration with this page and check the following item

☒ **This declaration ends with this page**

VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) & 1.27(c))--SMALL BUSINESS CONCERNDocket Number (Optional):
34291/GM/1pApplicant or Patentee: **Silvano MANSUTTI, Roberto CARDIN**

Application or Patent No.: _____

Filing Date or Issue Date: _____

Title: **MULTIFUNCTIONAL ELECTRONIC PALMTOP COMPUTER**

I hereby declare that I am

☐ the owner of the small business concern identified below:☒ an official of the small business concern empowered to act on behalf of the concern identified below:NAME OF SMALL BUSINESS CONCERN **4P S.r.l.**ADDRESS OF SMALL BUSINESS CONCERN **Viale della Regione Veneto, 26**
35127 PADOVA - ITALY

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:

☒ the specification filed herewith with title as listed above.☐ the application identified above.☐ the patent identified above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights in the invention must file separate verified statements averring to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization having any rights in the invention is listed below:

☒ No such person, concern, or organization exists.☐ Each such person, concern or organization is listed below:

Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING **Giuseppe SAIA**TITLE OF PERSON IF OTHER THAN OWNER **President**ADDRESS OF PERSONS SIGNING **Via G. Ferraris, 7 - 35136 PADOVA - ITALY**

SIGNATURE _____

DATE **December 12, 2000**